

Task Order No. 14
Contract No. PCE-I-00-96-00002-00

Connecting WebOPS to USAID's Real-World Problems: Six Essays on Information Culture and Technology

By
J. Kathy Parker
The CNA Corporation

June 1998

For
US Agency for International Development

Environmental Policy and Institutional Strengthening Indefinite Quantity Contract (EPIC)
Partners: International Resources Group, Winrock International, and Harvard Institute for International Development
Subcontractors: PADCO; Management Systems International; and Development Alternatives, Inc.
Collaborating Institutions: Center for Naval Analysis Corporation; Conservation International;
KBN Engineering and Applied Sciences, Inc.; Keller-Bliesner Engineering;
Resource Management International, Inc.; Tellus Institute; Urban Institute; and World Resources Institute

Contents

Introduction	5
1. Where the Information Culture Envisioned in the OPS BAA Report Went Wrong	6
1.1 the Promise of the Original Vision	6
1.2 The Nature of the Information Culture Envisioned by OPS BAA	6
1.2.1 Promoting the Agency's Core Values	6
1.2.2 Strengthening USAID's Key Functions—Planning, Achieving, Judging	7
1.2.3 Following the Principles Established at the Start of the Reengineering Effort	9
1.3 Problems in Implementation of the New Information Culture	10
1.4 WebOPS: a Tool to Address Some of the Problems of USAID's Information Culture	11
1.4.1 How to Achieve a Shared Vision and Strategic Direction	11
1.4.2 How to Better Prepare Partners and Customers to Assume Their Role in USAID's Information Culture	13
1.4.3 How to Come to Grips with Information So That it Serves a Learning Organization Rather than Pushes a Bureaucracy into a “Black Hole”	14
2. Helping Address Internet End-User Application Issues Encountered under the Leland Initiative in Africa	16
2.1 Background on the Leland Initiative	16
2.2 How WebOPS Can Address Some of the Leland Initiative's Internet End-User Application Issues	17
2.2.1 Internet Connectivity in General	17
2.2.2 Institutional Communication/Information Strategy	18
2.2.3 Current Production and Usage of Publications and Databases	18
2.2.4 Recognition of Potential Contribution of the Internet to Institutional Mission	18
2.2.5 Champion of Internet Within Institution	18
2.2.6 Telecommunications and Computer Infrastructure	18
2.2.7 Potential for Sustainability	19
3. Tools to Avoid Falling into the “Black Hole” of Information	20
3.1 Introduction	20

3.2	Selected Objectives and Tools for Managing Information	20
3.2.1	More Organized Information	20
3.2.2	Simplify Access	21
3.2.3	Broaden or Focus Dissemination	21
3.2.4	Increase Speed	21
3.2.5	Increase Directness	22
3.2.6	Provide Alternatives	22
3.2.7	Capture Knowledge as Learning Occurs	22
3.2.8	Increase Specificity and Clarity	23
3.3	Some Limitations of WebOPS	23
4.	Impact of Global Technologies and PC Networking on Team Decision-Making . . .	24
4.1	Introduction	24
4.2	WebOPS' Contribution to Improved Communications and Collaboration . .	24
4.3	WebOPS: Some Potential Pitfalls	25
4.4	WebOPS and Team Decision-Making	25
4.5	Summing Up	26
5.	Norms and Netiquette to “Herd Our Mice“ Effectively	27
5.1	Introduction	27
5.2	WebOPS Tools: Changing the Nature of Communication and Collaboration	27
5.3	WebOPS Tools: Associated Changes in Roles and Relationships	27
5.4	Summing Up	29
6.	Selected Indicators and Questions for Monitoring WebOPS	30
6.1	Introduction	30
6.2	Preliminary Ideas on Monitoring and Evaluating WebOPS	30
6.2.1	Effectiveness	31
6.2.2	Efficiency	31
6.2.3	Impact	32
6.3	Summing Up	32

Introduction

WebOPS represents a new set of information technology tools coming on-line in the U.S. Agency for International Development (USAID). The WebOPS vision is to provide a set of software tools via the Internet (at individual web sites formatted to support Strategic Objectives) to enable greater communication and facilitate increased collaboration between USAID staff and their partners—as well as *among* their partners—on Expanded SO and RP teams. The initial phase of development of WebOPS (establishing design requirements) by The CNA Corporation (CNAC) was funded by the Africa Bureau's Office of Sustainable Development under the EPIQ project managed by the International Resources Group (IRG).¹ The essays that follow were generated in support of the WebOPS vision. They are currently scheduled for posting on Africa Bureau's Results Framework Network (RFNET).

For more information on WebOPS, see *WebOPS Phase I Summary Report* by Thomas P.M. Barnett, M. Theresa Kimble, J. Kathy Parker, and William H. Sims (CNAC Annotated Briefing 98-5042, May 1998).

1. Where the Information Culture Envisioned in the OPS BAA Report Went Wrong

1.1 the Promise of the Original Vision

As USAID began the reengineering process, members of the Business Area Analysis Team for Operations published a seminal document, *Making a Difference for Development: Reengineering the U.S. Agency for International Development's Program Operations*, commonly known as the "OPS BAA Report." In describing the rationale behind the new OPS vision, the report's authors indicated that "significant developments in information systems technology acted as both a catalyst and enabler, promoting greater efficiency and effectiveness through information sharing" (OPS BAA, 1994: v).

In other words, USAID sought to focus the envisioned OPS system on information technologies that would enhance its ability to learn about itself, its processes, and its performance, and to act upon new knowledge as the Agency obtained it. Fundamental to this goal was the utilization of business process reengineering to ensure sufficient change in USAID's systems and culture so that it could become a learning organization where information plays a critical and constant role. More specifically, this meant improving the information nexus between USAID missions and their in-country development partners, for it is here that the OPS BAA team believed the Core Values must thrive if the new OPS system was to succeed in promoting sustainable development.

1.2 The Nature of the Information Culture Envisioned by OPS BAA

1.2.1 Promoting the Agency's Core Values

The OPS BAA team explicitly recognized the wide array of information uses in a learning organization, as well as the particular needs of individual end-users. First off, USAID staff would be communicating and sharing information in a far more inclusive manner with partners and customers in the field. They would be focusing more time and money on communication within USAID itself, as well as externally with stakeholders (e.g., Congress, OMB, GAO). But most importantly, mission staff would be leveraging information for more knowledgeable decision making, therefore, engendering more risk-taking in the field.

Because of improved information flow, staff members would understand more fully their roles and responsibilities (especially delegations of authority) so that the Agency as a whole could become a more effective organization, i.e. learning from both successes and failures. Thus, right from the start, USAID's reengineering effort placed strong emphasis on how data, information, and knowledge would contribute to refashioning the Agency's culture so that it "clearly focuses on customers, is oriented toward results, effectively uses teams to get work done, and empowers accountable people to make decisions to accomplish objectives" (OPS BAA 1994: 30).

1.2.2 Strengthening USAID's Key Functions—Planning, Achieving, Judging

Throughout the OPS BAA report, the authors identified where, when, and how information was to play a critical role in each of USAID's core functions.

In planning, information contributes to:

- Knowledge about purposes for which resources are allocated
- Consideration of a country's "investment climate" for sustainable development
- Assessment of contextual factors (e.g., social, economic, political, organizational, environmental)
- Analysis of development needs, problems, constraints, and opportunities for preparation of strategic plans
- Understanding future scenarios based on past and current trends that affect USAID's ability to achieve a given objective or set of objectives
- Identification of partners and assessment of their experience and comparative advantages
- Assessment of customer needs, capacities, and motivations for participation
- Incorporation of lessons learned from previous and current activities conducted by USAID, its partners, host country counterparts, and other donors
- Provision of accurate cost estimates and delivery schedules.

In achieving/implementing, information contributes to:

- Putting Results Frameworks into action
- Strategically managing as assumptions are invalidated or country conditions change
- Making more informed decisions about changing approaches, tactics and tools as problems arise or new opportunities appear
- Employing new procedures (e.g., surveys, teamwork) and systems (e.g., cost accounting and budget information systems) to meet customer needs, operate more efficiently, and maximize learning
- Responding to partner and customer feedback flexibly and avoiding rigid adherence to blueprints
- Developing the institutional capacity of partners through increased communication, coordination, and collaboration
- Bringing teams closer to field issues and making them more able to plan adaptively

- Increasing customer satisfaction because identified needs are addressed in a transparent fashion
- Making use of limited resources by tapping local knowledge and resources
- Procuring goods and services more quickly and efficiently (e.g., because of better information on contract mechanisms)
- Generating reports, such as the R4.

In judging/monitoring/evaluating, information contributes to:

- Improved program management
- Improved understanding of development hypotheses
- Clarification of objectives
- Assessment of causal relationships linking results to Strategic Objectives
- Identification of lessons learned concerning impact, unintended results (both negative and positive), and broader development theory
- Incorporation of lessons into ongoing and future activities
- Understanding approaches, tactics, and tools for achieving results
- Feeding performance information back into the resource allocation process
- Determination of customer satisfaction
- Verification that resources are well spent, thereby ensuring greater accountability.

1.2.3 Following the Principles Established at the Start of the Reengineering Effort

The OPS BAA team directly—and sometimes indirectly—outlined the principles guiding their approach to information management:

- Communication efforts would include the sharing of information multidirectionally, meaning not just from headquarters to field missions, but from the field to Washington, between field staff and partners, and among partners.
- There would be greater transparency in decision making by ensuring information would be easier to access, with the exception of fiduciary information.
- Information collection efforts would be more clearly defined by the Agency's strategic planning and management procedures so that information would be made more relevant to the tasks at hand (e.g., Results Package Team members needing to track performance, cost, and implementation data for adaptive planning as events unfold).

- The frequency of data would be geared for specific management responses, such as descriptions of other donor programs for updating strategic plans or undertaking a special study when a problem arises.
- Information flows would be appropriately timed for various end-uses, e.g., for the Results Review and Resource Request (R4), which in turns feeds into the congressional presentation (CP).
- Information would be made more fungible to meet multiple end-uses by multiple end-users, e.g., measuring the achievement of results in addition to, or versus, achieving financial targets.
- Information collection efforts would be guided by new standards of quality, thus improving the overall quality of development assistance.
- The quantity of information would be adequate to ensure both program quality and continuity, as well as respond to audit requirements.
- All information would ideally contribute to making the “new USAID” a learning organization, i.e., no information would be gathered that could not lead to action.

In the words of the OPS BAA report, USAID needed to:

...ensure the management systems, expectations and rewards (formal and informal) are oriented toward achieving results, monitoring progress toward results, making improvements along the way. In a learning organization, people are continuously monitoring customer needs and expectations, how well they are meeting them, and how well the organization is performing (efficiently and effectively). They use this information to take action to bring about improvement. USAID employees and partners need to learn the concepts and the analytical and problem solving tools of improvement. These need to become part of the toolkit for everyday business (OPS BAA 1994: 30).

1.3 Problems in Implementation of the New Information Culture

What was so hard about living up to the OPS BAA vision? One quick answer is that the devil is in the details. For example, the new “corporate culture” suddenly became more focused on achieving results than making sure money moved efficiently—as tracked by input/ output data—through pipelines. At the same time, it began to require fundamentally different kinds of information from many of the same people. The consequence was a disconnect between input/output data and data required to document evidence of achievement of results. Moreover, the OPS BAA vision often was not shared within the Agency—much less with partners and customers.

Interestingly enough, much of what the OPS BAA envisioned was nothing more than a variation on previously articulated themes of information requirements, albeit with a stronger strategic focus. On the surface, it was not all that clear that that much more effort was required. But staff cuts exacerbated the Agency's problem of having too few qualified personnel to accomplish the multiple and diverse tasks implied by OPS BAA's vision. In short, the Agency did not reengineer its personnel and incentives systems enough to address crucial show-stopping obstacles.

Building sufficient links to partners and customers who might have some of the needed information seemed an insurmountable task without more funds and technology. The promised technology never arrived in many places, and what arrived often did not generate sufficient connectivity among partners to provide the data necessary for adaptive management, empowerment, and accountability. The NMS's “firewall” was impenetrable not only for USAID's development partners, but for many Agency staff as well.

What information challenges were imposed by the requirements for planning, achieving and judging? Nothing much, just a level of data collection, analysis, and reporting that overwhelmed many staffs. Then there was the ever-widening information base, but little was provided in the way of mechanisms for quality assurance and control. There was also a wide array of sources to contend with, including: training sessions for staff and partners; meetings with customers; documents, such as strategic plans, R4 reports, guidance memos; electronic information management systems (the NMS); research, assessments, diagnostics, surveys, and lessons learned; and monitoring and evaluation systems.

Initially (and perhaps even now), many staff perceived that there were more meetings, more training, and report writing than “doing development.” Plus, there was little sense about what to do with all these new pieces and sources of information. There were too many of them. They were too disparate and often contradictory and too inaccessible to obtain in some cases. They took too much time to sort through, and often they were too difficult to locate, prioritize, and pay for. Finally, little time was left to transform data into knowledge for decision-making by newly accountable and empowered teams.

1.4 WebOPS: a Tool to Address Some of the Problems of USAID's Information Culture

WebOPS is being developed to address specific problems arising from trying to implement the original OPS BAA vision of a new information culture. WebOPS is not a successor or competitor to the NMS. Its design philosophy is entirely different. In fact, WebOPS will complement the NMS or any successor. Its objective is to provide both missions and development partners with sufficient capacity—through a web-based suite of software programs—to achieve more collaborative interactions at the Expanded Strategic Objective Team (SOT) and Results Package Team (RPT) levels. This directly addresses a major component of OPS BAA original vision of a reengineered USAID: WebOPS' extranet linkage (as compared to NMS which is limited to USAID's intranet) will offer partners opportunities for sharing information, planning collaboratively, and managing adaptively with other team members within an “electronic work space.”

Some of the problems outlined above that WebOPS will address include:

- How to achieve a shared vision and strategic direction
- How to better prepare partners and customers to assume their role in USAID's information culture
- How to come to grips with information so that it serves a learning organization rather than pushes bureaucracy into a “black hole.”

1.4.1 How to Achieve a Shared Vision and Strategic Direction

Problems have arisen, which, at their core, inhibit a shared vision and strategic direction. From the field perspective, some staff have expressed concern that there is no standard graphics capability (e.g., Org Chart is used in one mission, Harvard Graphics or ABC Flowchart in another). To some, this issue is less about standard graphics capability than it is about methodological purism. To others, it simply acknowledges USAID/W's interest in having Results Frameworks that are easily comparable across countries and regions, especially in reporting to Congress. From yet another perspective, the lack of a standard format may limit SO team members' ability to use the RF as a consistently constructed communication tool to discuss and develop a shared vision with their partners. Some even suggest that the lack of standard format may have impeded sharing across SOs and sectors. However, others insist that what really impedes a shared vision is the people, their personalities, their efforts to protect turf, their lack of understanding of what a development hypothesis is, and their uncertainty regarding how to apply the RF for strategic planning and management—not the lack of a standard template.

WebOPS plans to provide an electronic template for graphic construction as well as hypertext capability to capture the textual explanations behind the graphic. It can be used in a learning-while-doing approach that enables interactions among all members of Expanded SO teams. It will be customizable to a certain extent, but not so much as to hamper ability to pass it around and share with others with different software capabilities. The WebOPS template will enable more focused discussions among USAID staff and their partners. Through such discussions, a shared vision can arise as people move beyond the boxes of the graphical template to text files where the vision can be refined further.

Second, the Agency has supported a great deal of guidance development, training, and technical assistance on reengineering and Results Frameworks. In fact, many staff members report that they have been “trained or TA'ed to death.” However, I’m not sure it is the amount of training or TA that is the problem.

Some staff say they feel impeded by:

- The lack of a simple program to graphically portray their RF
- The lack of a standard approach to phrasing result statements and developing a set of plausible, causal relationships that give both a sense of the vision as well as a sense of the strategic direction of mission programs
- Examples of how to use the RF to bound their performance measurement plans
- Examples of how to apply the RF as a management tool.

Many have found that the “rubber hits the road” when SO Teams actually have to develop a Results Framework, or refine one after a training session or TA visit, or in preparation for a new R4 report. Not surprisingly, many begin to wonder if this is all just vague theory without any empirical or anecdotal data to substantiate its validity.

WebOPS addresses many of these concerns directly and can provide opportunities for later expansion and modification to meet the needs of Expanded SO and Results Package teams. WebOPS plans to feature tutorials on how to develop and update a Results Framework. It will also provide access to on-line training and help functions (e.g., a series of questions concerning the underlying logic and causality of the framework, guidance on how to use new information to test and validate development hypotheses underlying the RF). WebOPS will also provide access to an array of management software such as schedulers, address books, publishing tools, word processing, financial management software (e.g., for tracking staff levels, budgets), library archiving software, and links to other sites where management information can be easily accessed (e.g., the World Bank policy reform forum). WebOPS, therefore, will provide an array of tools and help functions that address the strategic planning and management functions of Expanded SO and Results Package teams.

1.4.2 How to Better Prepare Partners and Customers to Assume Their Role in USAID's Information Culture

Literal and figurative “firewalls” exist between missions and partners regarding the new OPS System. These firewalls must be understood and addressed in order to help prepare partners

and customers to assume their role in USAID's information culture. The NMS has a technological firewall which prohibits anyone outside of USAID from accessing information in the computer network. This firewall is necessary since it keeps certain kinds of fiduciary and contractual information secure. It is also appropriate in terms of providing security for other information that is sensitive or classified.

There is, however, a persistent figurative firewall that has remained in spite of the vision and intent of reengineering as outlined by OPS BAA and other Agency guidance. Evidence of this "cultural firewall" is exemplified by the practice of a Core SO Team doing all the work and relegating an Expanded SO Team—which includes partners—to the status of a mere reference group. The result is that partners and customers have far less experience with reengineering than mission personnel and are less able to participate actively as the reengineered system moves forward. The OPS BAA described Expanded SO Teams as the true implementing group and the Core SOTs as existing only for USAID direct-hire staff members to be able to recuse themselves now and then for fiduciary matters involving contracts.

Granted, it's much harder to run an Expanded SOT involving partners, but this is where information technology can help. WebOPS is being designed to facilitate efforts to achieve the OPS BAA vision to bring Expanded SOTs to life. One way to think about WebOPS is as an electronic teaming space. While some of the Expanded SOT work space may be open to outsiders, some of it may be more restricted to meet the demands of enhanced teaming. These demands include:

- An enabling environment for the free exchange and gestation of ideas
- A level of security that responds to member desires for trust and confidence for certain aspects of their work
- Access to a wide array of management tools the team can use as required.

WebOPS likewise can provide passwords that limit access to certain areas, such as a "business center" where a scheduler, groupware, and other productivity tools are available only to SO team members. This "team space" may also feature storage and archive retrieval capabilities for draft documents on which team members are collaborating. WebOPS can also provide locales where individual team members can store and work on their own files.

Another way of preparing partners and customers is through training. Many have not been trained in how the Agency has changed through its reengineering process, nor do they understand why it might make a difference. Some of those partners/contractors who have been trained feel that they did not learn what they needed most to learn—how to be more competitive bidders in the reengineered environment. Training of partners and customers is a critical area where USAID should provide more resources. The training should include not just how to develop Results Frameworks or structure proposals, but also how to work as members of Expanded SO or Results Package teams.

WebOPS can reduce this training/information gap by enabling an environment for:

- Learning via tutorials and wizards which provide on-line help

- Learning by doing, not always in isolation but more often together with colleagues in the electronic work space
- Increased communication where information becomes the currency of improved interactions with USAID staff.

Among other things, WebOPS can help by providing direct access to key documents by which work is planned, achieved, and judged. WebOPS can also provide access to team process software. Thus, while WebOPS may be perceived of as just another “silver bullet,” it aims to become a significant tool to support USAID's institutional capacity-building efforts. But to do so, it will require program funding, which will require a significant shift from USAID's O&E funding paradigm.

1.4.3 How to Come to Grips with Information So That it Serves a Learning Organization Rather than Pushes a Bureaucracy into a “Black Hole”

Another area where USAID needs to focus more attention is figuring out how to control information flow by developing filters for useful information and providing tools for boosting team decision-making capacity. One issue made evident by the OPS BAA's focus on partners and customers is that the Agency often lacks the tools—and, in some cases, the will—to tap “indigenous” knowledge by expanding the concept of “expert.” This includes USAID/W's frequent failure to tap knowledge from their own field staff about what is working or not working. It also includes USAID field staff not bringing partners into the strategic planning process soon enough. This often has happened because USAID personnel fear they do not understand reengineering well enough to risk going through the always difficult learning curve with their partners.

WebOPS can help by enabling increased communication with partners who often have more “institutional memory” and in-country continuity, as well as direct experience and understanding of causal linkages between intermediate results. Knowledge modules in WebOPS can help staff and partners tap the knowledge of local people who are the most aware of the local area's needs and constraints. WebOPS also can provide a library and index system, as well as a list server capability. These capacities would help focus information searches by enabling expanded SOT or RPT members to run ideas or questions past other team members, as well as those on the outside who might have applicable knowledge and experience. Thus, WebOPS can help bring to the table more relevant and useful information to the table to analyze problems and make decisions.

2. Helping Address Internet End-User Application Issues Encountered under the Leland Initiative in Africa

2.1 Background on the Leland Initiative

Development activities take on new forms and functions over time. In some cases, these activities are driven by the availability of new technologies that practitioners can apply to deal with old problems. In other cases, new situations and ways of thinking require a demand-driven approach. Here, the development community must come up with technologies and social processes in which they can address local constraints and opportunities.

USAID's efforts sometimes assume a strong supply-side approach. One example is The Leland Initiative in Africa. As the Agency's web site for the initiative describes it:

The Leland Initiative (LI) seeks to bring the benefits of the global information revolution to people of Africa, through connection to the Internet and other Global Information Infrastructure (GII) technologies. The Internet is emerging as a low cost pathway that allows information to be more accessible, transferable and manageable; ready access to information is becoming the catalyst that transforms economic and social structures around the world and supports fast-paced sustainable development. Even as African countries move toward more open economies and societies, there remain formidable constraints on sustainable development in such areas as the environment, disease prevention, literacy and private sector development. Africa needs access to the powerful information and communication tools of the Internet in order to obtain the resources and efficiency essential for sustainable development.

At the same time, this very exciting initiative has to confront and address many demand-side issues. These include how to facilitate Internet access and use by end-users.

Africa Bureau's Sustainable Development office is funding the development of WebOPS. It will be an Internet-based suite of software that complements, but does not compete with the New Management System (NMS). WebOPS' objective is to provide both missions and development partners with sufficient computing capacity to achieve more collaborative on-line interactions at the level of Expanded Strategic Objective Teams (SOTs) and Results Package Teams (RPTs). This directly addresses a major component of the original vision of a reengineered USAID. WebOPS' extranet link (as compared to NMS, which is limited to USAID's intranet) will offer opportunities for sharing information, planning collaboratively, and managing adaptively within an electronic work space. The intent of WebOPS, therefore, is to be more equitable and inclusive, to broaden USAID partners' access to local and global information, and to provide them with sufficient help functions to decide how they want to use it for work, communication, and collaboration.

2.2 How WebOPS Can Address Some of the Leland Initiative's Internet End-User Application Issues

2.2.1 Internet Connectivity in General

WebOPS has the potential to contribute to the demand for Internet service that the Leland Initiative works to provide. Because of its flexibility, WebOPS will provide an array of services that can be accessed by countries at very different stages of Internet development and consistency.

In cases where Internet capacity exists, USAID staff and partners can access it directly to conduct parts of their work as Expanded SOT and RPT members. They can download software to increase productivity, communicate with each other via E-mail or E-conferencing, and access other databases via “hot links” to other web sites.

In other cases, WebOPS will provide updated material via CD-ROM to those who have more limited Internet access. However, early preparation for the time when Internet capacity becomes available will make the transition easier.

In general, WebOPS will provide opportunities for greater utilization of information and global information technologies via the Internet, and thus will bring USAID and its partners closer to entering the information age by encouraging the development of an information culture that focuses on greater communication, information sharing, and learning. WebOPS' contribution to improved partnerships, communication and collaboration will enhance the Internet's potential developmental impacts.

WebOPS cannot address some of the major barriers to Internet access and use (e.g., absence of service providers and onerous telecommunications policies that seek to keep citizens under “mouse arrest”). However, WebOPS can address, to some degree, existing barriers to Internet use identified by the Leland Initiative, such as:

- Lack of awareness or understanding of the Internet and its potential use
- Lack of institutional communications and information strategies which the Internet, as a global resource, supports.

One way of assessing the potential of WebOPS is to use the set of initial indicators developed by Leland Initiative “to measure an institution’s readiness for effective use of the Internet.” The following identify the initial indicators and describe some of the contributions that WebOPS may make to increasing the “effective use of the Internet.”

2.2.2 Institutional Communication/Information Strategy

The institution should be able to articulate a position on the role of communication and information in the institution.

USAID and its partners may find that the application of WebOPS will help focus more of their staff's attention on how to use the communication and information tools made available to them. More importantly, however, WebOPS may serve as a focal point for better understanding and articulating broader strategies for improved communication and information to meet institutional goals.

2.2.3 Current Production and Usage of Publications and Databases

In institutions already producing publications or collecting data, there is good indication that communication and information are integral to the institution's operations.

WebOPS can contribute to the enhancement of these institutions' information operations by making publications and databases more available, providing that these items are shared with others as appropriate. WebOPS will also provide opportunities for the exchange of ideas and the dissemination of lessons learned elsewhere. Therefore, distance can be overcome by human networking efforts via the Internet.

2.2.4 Recognition of Potential Contribution of the Internet to Institutional Mission

Users of WebOPS will be exposed to a wide array of Internet-based communication and information-sharing capabilities. Their experience will enhance institutional understanding of the potential contribution of the Internet.

2.2.5 Champion of Internet Within Institution

For a new technology or idea to be accepted within an organization you need an individual who will be the spokesperson for the idea.

Access to, and usage of, WebOPS will catalyze broader Internet usage within participating organizations. This will include USAID because of enhanced interactions with partners, as well as between partners themselves.

2.2.6 Telecommunications and Computer Infrastructure

Many institutions across Africa do not have the computer hardware, Internet access, and, in many cases, not even adequate telephone and electrical capacity to support Internet-based operations. In these cases, WebOPS proposes to work with USAID missions who are developing institutional capacities through use of program funds. WebOPS would update software and make information available via CD-ROM to Expanded SOTs and RPTs. Through its tutorials, WebOPS will also prepare partner institutions to be ready to use the Internet as soon as it becomes available.

2.2.7 Potential for Sustainability

Rates the ability of the institution to build into its current program the maintenance of this resource both in financial and human resource terms.

This focuses on whether an institution will use the Internet as a common tool that they maintain and sustain, much as telephones and fax machines. WebOPS cannot address the financial resource issues. However, as a user-friendly electronic workspace, WebOPS can reduce the potential discomfort USAID staff and partners might have with computer hardware and software. Also, the enhanced institutional and human capacity arising from use of WebOPS can contribute substantially to the human resource sustainability issue raised by this indicator.

2.3 Summing Up

WebOPS is no “silver bullet,” but as my discussion of the Leland Initiative suggests, it may go far in enhancing the effective use of the Internet by USAID staff and its partners.

3. Tools to Avoid Falling into the “Black Hole” of Information

3.1 Introduction

In the expanding universe of information, USAID staff and development partners will have to make choices to avoid falling into the “black hole” of information overload. While computer-based communications and collaboration technologies, such as E-mail and the Internet, make information more accessible, they also bring with them a potentially dense domain of “data smog” as the Agency moves further and faster into the information age.

WebOPS will allow users to customize the suite of communications and collaboration software. While there will be some limitations to what users can and cannot do, USAID staff and their partners must make decisions concerning the timing, frequency, sources, and number of interactions, as well as the amount and kinds of information needed by Expanded SO and Results Package team members.

From the outset, user needs will guide selection of software capabilities introduced and/or added to the suite being assembled in Phase II (development and testing) of WebOPS. Being Internet- based, the structure may not be evident, but WebOPS will provide users with tools for more efficient access to, and use of, information. However, the overall intent of all the tools is to avoid, or limit, information overload. Below is a brief discussion of some of these tools, clustered by objective category.

3.2 Selected Objectives and Tools for Managing Information

3.2.1 More Organized Information

Message threading will facilitate group discussions via asynchronous posting of messages by interested parties.

News groups can be created to:

- Focus on specific kinds of information
- Provide opportunities to interact with colleagues and other experts who can provide some filtering function, a.k.a. “information triage”
- Discuss the validity or accuracy of information or replies from members of the group
- Initiate discussions that may prompt new avenues of inquiry.

- Search functions will provide opportunities to specify specific topics.
- Indexes will provide ideas about the array of available information, and where boundaries should logically be set.
- List server archive functions will help search and find information of specific interest to list serve members.

3.2.2 Simplify Access

- WebOPS will employ easier ways of creating and exchanging graphics of RFs than are currently available.
- There will be easier and more transparent movement between databases separated by distance.
- Bookmarks will help users identify and return to a given site without searching again.
- Hot links will allow the user to jump from one Uniform Resource Locator (URL) site to another.
- Internal links will permit the user to navigate or move through an individual web site, avoiding scrolling of lengthy documents.

3.2.3 Broaden or Focus Dissemination

- E-conferencing allows greater and easier distribution of information throughout an organization by focusing discussion among those “invited” to a given conference.
- A common information base can be shared in advance of an E-conference or a face-to-face meeting that serves as a springboard to interactions.

3.2.4 Increase Speed

- E-conference calls tend to be longer than textual interactions, but can be facilitated by video-conferencing facilities that can be accessed by WebOPS.
- Electronic transfer of text, spreadsheets, slide presentations, and other documents can be more cost and time effective than other forms of transmission (e.g., “snail mail”).

- Written text electronic publishing can provide the basis for expedited reporting, as reading tends to be faster than speaking (i.e., oral reporting).

3.2.5 Increase Directness

- E-mail can provide for direct exchange of information.
- Electronic transmission permits exchange of documents that can be modified.
- Hypertext is a significant reference tool that allows the searcher to be one click away from related texts.
- Emerging E-meeting software (e.g., Microsoft's Netmeeting) provide opportunities for direct real-time “discussions” over great geographical distances.

3.2.6 Provide Alternatives

- Internet gateways to facsimile transmission may compensate for some of the problems that exist where E-mail or other connectivity is more limited.
- Users can develop a number of networks that will facilitate communication and collaboration for those involved in them (e.g., information networks, bulletin boards, task networks of chat groups dealing with a specific issue, direct communication networks employing E-mail).
- Individuals can cut down on the amount and time of travel, and also keep in better touch when traveling.

3.2.7 Capture Knowledge as Learning Occurs

- Knowledge-based systems can be programmed to “learn” to make links to documents based on use patterns.
- In essence, as the “knowledge capital” of a group grows, each member of the group becomes a filter. Typically, each will sift through large amounts of information on one or several topics of potential interest to others. Their knowledge about “what’s out there” can be tapped by others in the group in a synergistic, multiplier fashion.
- As users get more experience “surfing the Web,” they become more proficient at identifying information that is of potential interest or use to them.

- Knowledge-based systems allow for the capture, valuing and sharing of two essential kinds of knowledge:
 - Explicit knowledge
 - Tacit knowledge (experience and indigenous knowledge of a given social group).

3.2.8 Increase Specificity and Clarity

- A scheduler can provide information (e.g., what's "on tap," what's occurred) that might be useful to team members.
- A scheduler can also provide group awareness of the number and kind of interactions that have occurred, thus imparting a sense of the level of effort either required or previously focused on a given topic.
- A scheduler can provide input to decision making about the need to attend a meeting, as well as provide details to avoid overlap or excessive meetings (both face-to-face and virtual).

3.3 Some Limitations of WebOPS

WebOPS cannot meet all the challenges of the information age, but from the outset, it will provide tools to mediate some of the problems of information overload. As it does so, Expanded SO and RP team members need to become aware of some of the efficiencies of the WebOPS design. However, the humans who use these web-based tools will need to make important decisions about the potential loss of "richness" of detail and nuance when:

- Information is devoid of non-verbal cues of body language
- Bureaucratic interests provide incentives or sanctions for managers to distort, ignore, or misuse information
- People tend to believe that because it is on a computer, the information must be correct or appropriate.
- None of the challenges are particularly new to the universe of computer users, but all will likely be somewhat exacerbated by the employment of web-based information tools such as WebOPS.

4. Impact of Global Technologies and PC Networking on Team Decision-Making

4.1 Introduction

As USAID makes a concerted effort to move ever forward into the information age, it has sought a variety of computer-based venues to enhance communications and decision-making. Some of the Agency's efforts have been more successful than others. However, improving communications and facilitating greater collaboration between USAID and its partners is one of the greatest challenges posed by the OPS BAA's seminal report.

Part of this challenge is highlighted by organizational communications research. Literature from this area of study suggests that changing the structure of communications changes the kinds of decisions made, as well as the ways in which they are made. It also ultimately changes the organization itself.

4.2 WebOPS' Contribution to Improved Communications and Collaboration

WebOPS is founded on the belief that:

- Information is critical to team decision-making
- Tools must be readily available to collect, analyze, and direct information to points where decisions are made
- An information technology interface is needed for improving interactions among decision-makers, i.e., making them more rapid and allowing for asynchronous interactions among those separated by great distances
- Technology can serve as a tool for sharing visions, values, and beliefs, which, in turn, enable more effective teamwork
- Computers provide an electronic work space where input from participants is generally more candid than in face-to-face interactions
- More opinions can be asked for and received via electronic means than in traditional interactions
- When interacting in a virtual meeting environment, participants exhibit less tendency to agree with the opinions of others, especially those who might previously been dominant in the decision-making process.

4.3 WebOPS: Some Potential Pitfalls

The designers and proponents of WebOPS also understand that it has a potential to fail. Possible reasons for failure include, but are not limited to:

- Lack of access to computers and associated technologies that enable consistent and effective access to the Internet
- Lack of desire or perceived need by team members to communicate and collaborate in decision-making activities via computers
- Lack of trust that this tool will decentralize decision-making versus providing “Big Brother” with information at will
- Lack of training materials (in acceptable media) and experience in using the technology
- Lack of leadership or institutional support for a “critical mass” of participating team members to develop
- Lack of “cultural continuity” (i.e., integration and cohesion among team members) that inhibits or stops the flow of communication and collaboration as quickly and effectively as any technological problem.

Thus, many aspects of WebOPS depend on human rather than technological dimensions to succeed as a tool for communication and collaboration.

4.4 WebOPS and Team Decision-Making

An important aspect of the diverse human dimensions of any computer-based technology is the “fit” of the technology within an organization. In fact, the structure of computer communications, like WebOPS, can fit into just about any kind of organizational structure. However, its use will take on many of the attributes of other tools for communications and decision-making. Hierarchical organizations have more centralized communications channels and decision-making styles. Therefore, greater access to information for team decision-making, which WebOPS hopes to provide, may be perceived as a threat to the existing power structure.

More open and transparent organizations can use WebOPS to facilitate the flow of communication up, down, and across the organization. In this kind of structure, researchers hypothesize that more disagreement among team members is apt to occur in computer conferencing than in face-to-face interactions because of a diminished impact of higher status members on those of lower status. There is also a tendency to have more participants, and more

participation per participant, if a single dominant leader does not exist. This is more typical of computer conferencing than interpersonal meetings; thus, there will likely be multiple leaders.

A larger-sized team may also better utilize computer conferencing and interactions. WebOPS can provide tools to better organize discussion and problem-solving. It can enable teams to tap the diversity of their resources without diminishing their ability to communicate and collaborate freely. WebOPS can also be customized to provide opportunities for sub-conferences which can tap into the motivation of individuals to participation in more focused working groups rather than feeling that they are only a small “cog” in a larger “machine.”

While WebOPS can enable team collaboration, increase the speed of communication, alter organizational structure, and provide team members with greater access to information for decision-making, it may not increase the speed of achieving consensus if the team prefers a slower decision-making mode. Also, it also may not increase the level of the team's risk-taking, which is a crucial part of USAID's reengineering rhetoric, even though teams are typically more prone to risk-taking than individuals due to the role of leadership. But since computer communications reduce the tendency to have a dominant leader, risk-taking likewise may also be reduced. Research does seem to suggest, however, that tools such as WebOPS, because of improved communication and collaboration, may facilitate a decision-making pattern in which less “imprudent” decisions are made.

4.5 Summing Up

Continued effort and experimentation are on the horizon for USAID staff and development partners. The information tools which Expanded SO and RP teams employ will provide greater understanding about the impact of global technologies and PC networking on team decision-making in the Agency. The directions they take, the tools they adopt and refine, and the results they achieve will likely change the face of USAID in ways never anticipated at the start of reengineering.

5. Norms and Netiquette to “Herd Our Mice“ Effectively

5.1 Introduction

The “mouse” has become a primary hand tool among humans in this rapidly developing information age. Another way to think about a mouse is in terms of its unparalleled power as a tool to facilitate the way people communicate and/or collaborate with each other. Basically, a mouse links the human mind and hand inward to a computer’s hardware and software. From there, with additional connections to telephones and other technologies, it can help extend human thoughts outward into the vast territory called cyberspace. The mouse is, therefore, part of an increasingly seamless set of global connections between computers and people, as well as among people. One of the great challenges of the information age is to collectively work to “herd our mice“ to serve our wants and needs.

USAID staff and their partners are among the “herders of mice.” They increasingly find their workday filled with computer technologies that begin with a click of their mouse.

5.2 WebOPS Tools: Changing the Nature of Communication and Collaboration

The technological challenges of the development and testing of WebOPS will likely be great. However, it will certainly be less daunting than USAID’s experience with the far grander New Management System (NMS). WebOPS will focus primarily on moving information and interactions outside the Agency’s firewall to a broader group of end-users than NMS ever could have done. Thus, WebOPS is not a replacement for, nor a competitor of the NMS. Rather, WebOPS complements and builds on the work that has preceded it. Most importantly, it makes use of the increasingly available commercial off-the-shelf software (COTS) that can be accessed via the Internet.

WebOPS will provide tools to enable greater social exchange between Agency staff and partners separated by close or even potentially great distances. WebOPS will provide for both synchronous (e.g., video conferencing, “real time” meetings) or asynchronous (e.g., E-mail) time frames of exchange. Even the asynchronous communications can move with a speed unknown in the past when the speed and data networks of computers did not exist. In all of this, the mouse will play a major role, as participants click on it to send, receive, retrieve, store, and link.

5.3 WebOPS Tools: Associated Changes in Roles and Relationships

WebOPS will facilitate human interactions, most specifically computer-mediated communication and collaboration. Some of these interactions will result in the exchange of ideas, the coordination of activities, and collaboration on joint development assistance efforts. Some of these interactions will also exhibit an array of disruptive behavior including:

- Defection of members who may begin to feel the paranoia that “Big Brother is looking over their shoulder”
- “Free riding,” where member participation is limited to receiving collectively produced benefits without contributing to their production
- Members using excessive amounts of available bandwidth to post extremely long messages.
- WebOPS alone cannot resolve these issues. However, this essay highlights some of the areas where Expanded SO and RP teams may want to focus attention to ensure that agreed upon behavior is defined and enforced as use of the Internet and other computer capabilities for communication and collaboration increases—in other words, the etiquette of the Internet, or “netiquette.”

The following outlines some of the potential areas of initial concern upon which teams may want to focus attention:

- How will the team boundary be defined? By whom? How will changes in it be addressed?
- Who will define rules? Will all members have a right and responsibility to participate in developing, modifying, and applying sanctions based on established rules?
- Who will monitor team member behavior? Based on what indicators? How will conflicts be prevented, mediated, or resolved?
- A system for coordinating information exchange will likely be necessary. Will it be open or will it be moderated by a team member?
- People having access to “public goods” produced by the team will raise the issue of “free riders” who benefit without contributing. Is this acceptable to the team? How will the team set the bounds on who benefits relative to who contributes?
- What about participants who “grandstand” by taking up too much time, raising irrelevant issues, or otherwise affecting the focus of the group? What rules might the team want to enforce that sanction this kind of behavior?
- What will the mutually agreed rules of decorum or civility be? Who will enforce them? How?

- Will individual members “own” their own documents? Will they be permitted to put them on the Web or remove them? Can they change their location name? Do they have the right to make them accessible or not at any given time?
- Will the team seek permission to link to another site before doing so?
- Power shifts may occur within USAID or partner institutions as those more comfortable with computer technology become “early adapters” of new tools and capabilities. How will organizations and teams deal with these situations? How will they deal with issues of inclusion or exclusion? Will the flow of information be up, down, and across? Or will it be inhibited by some organizational dynamic that influences team member behavior beyond the bounds of the team?
- What will be the expectations of team members relative to participation? How will absences or delays in response be addressed? Will up-front input be required or brief explanations be adequate when emergencies or urgent situations interrupt communications?

5.4 Summing Up

The need to give careful thought to “netiquette” should begin now. Whether or not WebOPS is the preferred IT path for the Agency, the time has come for USAID to begin preparing for this aspect of the information age.

6. Selected Indicators and Questions for Monitoring WebOPS

6.1 Introduction

While designed to help achieve the original vision of the Agency's OPS BAA Report, WebOPS, like other aspects of USAID's reengineering efforts, needs to be monitored and evaluated for the nature and magnitude of its contribution to achieving that vision. The general purpose of the proposed monitoring effort would be to:

- Look at whether the web-based tools contribute to productivity
- Keep open a dialogue with users so as to modify, refine, and improve WebOPS over time
- Increase user satisfaction with the technology, as well as their motivation to employ the electronic work space it provides.

Information technology expert Marc Smith has written that:

The most interesting questions about virtual spaces are not directly related to technology. Despite the intimate relationship between the tools and the actions built from or with those tools, it is the social understanding of a tool that determines its use.

Thus, while some questions deal with the adequacy of the technologies and tools themselves, more need to be posed about how software and hardware serve people's needs and wants.

Like with so many efforts that USAID undertakes, this poses a challenge for those monitoring and evaluating WebOPS. It may be easier to change the technologies and systems than the people themselves (i.e., USAID staff, partners, customers), meaning their cultural attitude and the context in which they use these technologies and systems.

6.2 Preliminary Ideas on Monitoring and Evaluating WebOPS

Among the issues where monitoring and evaluation seem most important are:

- The effectiveness of WebOPS as a set of computer and Internet-based tools

- The efficiency of using WebOPS in planning, achieving and judging efforts
- The contribution of WebOPS to improved teamwork and the achievement of results.

Below are some questions that may get to the heart of the issues enumerated above.

6.2.1 Effectiveness

- Does the tool match the problem for which it is being used (e.g., a list server available to help development practitioners communicate on how to solve a technical problem in the field; an E-conference to connect lawyers developing a contract that ensures the property rights of a local community in their negotiations with a pharmaceutical company; an on-line database to provide cooperative members with crop prices on regional commodity markets)?
- How does WebOPS affect relationships (i.e., supplements face-to-face communications or replaces them with detrimental effect)?
- Is WebOPS user friendly? Is its ease of use balanced with other criteria for functionality?
- How does WebOPS rate on the issues of quality, timeliness and relevance of information flows (i.e., do the right people get the right information at the right time)?
- Is there increased integration of USAID and its partners? Does WebOPS address the array of purposes, group sizes, amount and structure of communications, and level of interactions desired by all users?

6.2.2 Efficiency

- Are USAID staff and development partners adequately trained and empowered to use WebOPS to enhance teamwork and the quality of their decisions?
- Does WebOPS decrease the expense of communications and collaboration (e.g., time in meetings, time on E-mail, decision-making time)?
- Does less cost (as Internet connectivity grows) outweigh other potential negative impacts?
- Is there a measurable increase in productivity?
- Is there improved production (fewer mistakes, faster service)?

- Is there improved customer service (i.e., a reduced gap between expectations and the delivery of services needed)?
- Is there a change in return on investments (i.e., does information technology increase mission performance)?

6.2.3 Impact

- What is the status of national telecommunications policy that affects—or is affected by—WebOPS in some way?
- Does WebOPS facilitate learning and adaptive management? How?
- Are there changes in decision-making processes (e.g., broader participation, tapping new input sources)?
- Are there perceived changes in the quality of decisions?
- Did the developers' sensitivity to user input enhance the functionality and impact of the tools made available?

6.3 Summing Up

Over half of the United States' GNP is involved in some aspect of information technology (IT) activities, including the production, analysis, retrieval, and transmission of information. Yet few efforts have been undertaken to track the effectiveness, efficiency, productivity, value and impact of IT advances. As USAID moves deeper into the information age, it should monitor and evaluate the IT it employs to find its best fit with the Agency's information needs.

One lesson the Agency has already learned is not to ignore M&E that indicates that a given IT must be “killed” before it gets too big or dysfunctional. Many other lessons loom on the horizon, and the pace of IT change demands swift response to all of them, not just within USAID itself, but throughout all its interactions with partners.